

## **ABSTRACT**

**[0187]** One aspect of the current invention is a method of decreasing an involuntary cull rate in farm animals, wherein the involuntary cull results from infection, disease, morbidity, or mortality. Additionally, milk production, animal welfare, and body condition scores are improved by utilizing methodology that administers the isolated nucleic acid expression construct encoding a GHRH or functional biological equivalent to an animal through a parenteral route of administration. Following a single dose of nucleic acid expression vector, animals are healthier and effects are demonstrated long term without additional administration(s) of the expression construct.